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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,263	09/19/2003	Samer P. Wasif	2002P20734US01	6061

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Siemens Corporation
Intellectual Property Department
170 Wood Avenue South
Iselin, NJ 08830

EXAMINER

KIM, TAE JUN

ART UNIT	PAPER NUMBER
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3746

DATE MAILED: 02/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/667,263

Applicant(s)

WASIF ET AL.

Examiner

Ted Kim

Art Unit

3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-3 is/are allowed.
- 6) ☒ Claim(s) 4,8-15,17,18 and 20 is/are rejected.
- 7) ☒ Claim(s) 5-7,16 and 19 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>09/19/2003</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 20 is rejected under 35 U.S.C. 102(b) as being anticipated by Ohtsuka et al (5,623,826). Ohtsuka et al teach a combustor comprising: a combustor liner 9S; a burner assembly 4 associated with the liner and having an inlet; a fluid flow path 3 defined between the liner and a casing spaced radially outward from the liner, the fluid flow path discharging a fluid into a flow reversal region proximate the inlet of the burner assembly; and a fuel outlet 2, 4 disposed in the flow reversal region (see Figs. 7, 21).

3. Claim 20 is rejected under 35 U.S.C. 102(b) as being anticipated by Cohen et al (5,722,230). Cohen et al teach a combustor comprising: a combustor liner 38; a burner assembly associated with the liner and having an inlet; a fluid flow path defined between the liner and a casing spaced radially outward from the liner, the fluid flow path discharging a fluid into a flow reversal region proximate the inlet of the burner assembly; and a fuel outlet 105 disposed in the flow reversal region (see Fig. 1).

4. Claim 20 is rejected under 35 U.S.C. 102(b) as being anticipated by Sharifi (6,109,038). Sharifi teaches a combustor comprising: a combustor liner 44; a burner assembly associated with the liner and having an inlet near 22, 24; a fluid flow path defined

between the liner and a casing spaced radially outward from the liner, the fluid flow path discharging a fluid into a flow reversal region proximate the inlet of the burner assembly; and a fuel outlet 50, 52 for fuel 16', 16'' disposed in the flow reversal region.

5. Claims 4, 8-13, 17, 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Monty (5,623,827). Monty teaches a combustor comprising: a cylindrical basket (note that the can-annular configuration is taught, thus the basket is cylindrical, col. 3, line 34) 16 having an axis; a burner assembly 26 disposed within the basket and separated from the basket by an annular space e.g. near where element numeral 38 is labeled, the burner assembly configured to discharge a fuel/air mixture into a combustion chamber downstream of the burner assembly; and a burner insert 40 disposed in the annular space, the insert 40 having a downstream face exposed to the combustion chamber and perpendicular to the axis of the basket; an insert support 42 for supporting the burner insert, the insert support disposed on a side of the burner insert opposed to the combustion chamber and protected from exposure to hot combustion products by the burner insert; a passage (one of 38) formed through the insert support for conveying a fluid to cool the burner insert; an impingement plate defining a plenum for receiving the fluid and further comprising a plurality of holes (rest of 38) for directing the fluid to impinge 39 on a face of the burner insert opposed the combustion chamber.

6. Claims 4, 8-10, 13-15, 17, are rejected under 35 U.S.C. 102(b) as being anticipated by Heberling et al (5,540,056). Heberling et al teach a combustor comprising: a cylindrical basket 27 (combustor cans are taught on col. 4, lines 14+) having an axis; a burner assembly

20 disposed within the basket and separated from the basket by an annular space, the burner assembly configured to discharge a fuel/air mixture into a combustion chamber downstream of the burner assembly; and a burner insert 28 disposed in the annular space, the insert having a downstream face exposed to the combustion chamber and perpendicular to the axis of the basket; an insert support 81 for supporting the burner insert, the insert support disposed on a side of the burner insert opposed to the combustion chamber and protected from exposure to hot combustion products by the burner insert; a passage 74 formed through the insert support 81 for conveying a fluid to cool the burner insert 28; an impingement plate 81 defining a plenum for receiving the fluid and further comprising a plurality of holes 74 for directing the fluid to impinge on a face of the burner insert opposed the combustion chamber; the burner insert is removably attached to the insert support; the burner insert further comprising a substantially J-shaped cross section wherein a hooked portion of the J-shaped cross section forms a circumferential mounting lip around an inside diameter of the burner insert. In the can combustor configuration, the burner is a single main burner as it is illustrated on the centerline of the combustor (note that there are numerous references cited which show that this is true of the can combustor).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over McWhirter et al (5,743,206) in view of Takahara et al (5,450,725). McWhirter et al teach a combustor comprising: a combustor liner 27, 28; a burner assembly 10 associated with the liner and having an inlet; a fluid flow path defined between the liner and a casing spaced radially outward from the liner, and a fuel outlet 34. McWhirter et al do not teach the fluid flow path discharging a fluid into a flow reversal region proximate the inlet of the burner assembly. However, the combustor type of McWhirter et al is frequently a reverse flow combustor, e.g. like Takahara et al, where the air d flows in reverse to the combustion gases. It would have been obvious to one of ordinary skill in the art to make the combustor, a reverse flow combustor, as a conventional type of combustor frequently used with this combustor configuration, upon which the fuel 34 is disposed in the flow reversal region.
9. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heberling et al (5,540,056), and further in view of Bensaadi et al (6,035,645). Heberling et al teach various aspects of the claimed invention but do not teach the annular gap along the circumference of the burner insert for allowing fluid to flow into the combustion chamber. Bensaadi et al teach a combustion chamber with burner insert 10 and annular gap where air is allowed to flow around the burner insert and into the combustion chamber. It would have been obvious to one of ordinary skill in the art to incorporate an annular gap around the burner insert to allow the air to escape into the combustion chamber, as otherwise there is no outlet for the air in Heberling et al, and/or to enhance cooling about the edge of the burner insert.

10. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over any of the above prior art as applied to claim 4 above, and further in view of either Iwai et al (6,070,411) or Ohtsuka et al (5,623,826). The prior art teach various aspects of the claimed invention but do not teach the basket further comprises a plurality of passageways circumferentially positioned proximate to and downstream of the burner insert for allowing air to flow into the combustion chamber proximate the burner insert. Iwai et al teach the basket further comprises a plurality of passageways 60 (see face of patent) circumferentially positioned proximate to and downstream of the burner insert for allowing air to flow into the combustion chamber proximate the burner insert. Ohtsuka et al teach the basket further comprises a plurality of passageways (where flow 3 reverses to the right of 8) circumferentially positioned proximate to and downstream of the burner insert for allowing air to flow into the combustion chamber proximate the burner insert. It would have been obvious to one of ordinary skill in the art to employ the basket further comprises a plurality of passageways circumferentially positioned proximate to and downstream of the burner insert for allowing air to flow into the combustion chamber proximate the burner insert, in order to provide for primary combustion air in the wall.

Allowable Subject Matter

11. Claims 1-3 are allowed.
12. Claims 5-7, 16, 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Contact Information

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Ted Kim whose telephone number is 571-272-4829. The Examiner can be reached on regular business hours before 5:00 pm, Monday to Thursday and every other Friday.

The fax numbers for the organization where this application is assigned are 703-872-9306 for Regular faxes and 703-872-9306 for After Final faxes.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler, can be reached on 571-272-4834.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist of Technology Center 3700, whose telephone number is 703-308-0861. General inquiries can also be directed to the Patents Assistance Center whose telephone number is 800-786-9199. Furthermore, a variety of online resources are available at <http://www.uspto.gov/main/patents.htm>



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